

Comparisons of Job Characteristics

Focus Occupation: [Engineers, All Other \(17-2199\)](#)

Associated Occupation: [Civil Engineers \(17-2051\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 74

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Civil Engineers (17-2051)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	24.5	20.1	<<	Extensive education and/or training may be required
Design	5.2	23.4	16.5	<<	Extensive education and/or training may be required
Building and Construction	4.0	21.6	6.6	<<	Extensive education and/or training may be required
Mathematics	9.2	20.0	17.1	<	Expanded education and/or training may be required
Physics	4.3	15.8	14.8	0	Current knowledge level may be sufficient
Transportation	4.6	13.9	4.3	<<	Extensive education and/or training may be required
Administration and Management	8.4	13.0	10.6	<	Expanded education and/or training may be required
Public Safety and Security	6.9	12.6	7.9	<<	Extensive education and/or training may be required
Law and Government	5.9	11.3	6.4	<<	Extensive education and/or training may be required
Chemistry	4.8	10.8	8.8	<	Expanded education and/or training may be required
Geography	3.9	9.7	3.2	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Civil Engineers (17-2051)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematics	6.2	15.7	12.8	<	A higher skill level may be required
Operations Analysis	5.0	14.6	10.8	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	14.5	12.7	<	A higher skill level may be required
Judgment and Decision Making	9.4	14.5	12.1	<	A higher skill level may be required
Science	4.5	11.9	11.4	0	Current skill level may be sufficient
Systems Analysis	6.5	11.7	11.7	0	Current skill level may be sufficient
Systems Evaluation	6.4	11.7	11.1	0	Current skill level may be sufficient
Management of Personnel Resources	6.9	11.2	8.9	<	A higher skill level may be required
Management of Material Resources	3.7	9.1	5.9	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	8.9	5.8	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Civil Engineers (17-2051)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Problem Sensitivity	11.1	15.4	14.0	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.2	15.0	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	14.9	13.4	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	14.4	13.7	0	Current ability level may be sufficient
Visualization	7.5	14.1	11.7	<	Some improvement in abilities may be required
Number Facility	6.3	13.9	11.6	<	Some improvement in abilities may be required
Information Ordering	9.9	13.8	13.2	0	Current ability level may be sufficient
Category Flexibility	9.0	13.4	12.3	0	Current ability level may be sufficient
Flexibility of Closure	7.8	13.3	9.9	<<	Extensive improvement in abilities may be required
Perceptual Speed	7.4	11.8	9.2	<	Some improvement in abilities may be required
Speed of Closure	5.9	9.9	7.7	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 80

Focus Occupation: Engineers, All Other (17-2199)
Associated Occupation: Civil Engineers (17-2051)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Cameras	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Duplicating machines	6
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Length and thickness and distance measuring instruments	2
Meteorological instruments	16
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.